

Contents

- **Director's Desk**
- **Research achievement**
- **Farmers Corner**
- **Events organized**
 - **Trainings**
 - **National seminars/ workshops**
 - **Resource person**
- **Extension Activities**
 - **Trainings**
 - **Agri. exhibitions**
 - **Melas**
- **Technology Transferred/ MoU**
- **Distinguished Visitors**
- **Farmers & Students Visitors**
- **Personnel**
 - **Awards**
 - **Promotions**
 - **Publications**
 - **New Projects sanctioned**

From the Director's Desk (निदेशक की कलम से)

Dear Readers,

I am pleased to share proud moments that reflect NRCP's ongoing commitment to excellence in research, innovation, and outreach. We had the honour of hosting Hon'ble Shri Shivraj Singh Chauhan, Union Minister of A & FW and RD, and Hon'ble Shri Devendra Fadnavis, Chief Minister of Maharashtra, at our technology exhibition stall during the Kisan Diwas celebration at Pune. Their visit and appreciation of our work reaffirm our commitment to advance sustainable horticulture and farmer welfare.



I am also humbled to have received the 'Lifetime Achievement Award' at the 8th Asian PGPR Society International Conference, held at the World Vegetable Centre, Taiwan. Dr. Manjunatha N. was also recognized with the 'Excellent Researcher Award' in this conference. Our pomegranate variety 'Solapur Anardana' was among the 109 new varieties dedicated to the nation by the **Hon'ble Prime Minister** in August 2024, highlighting NRCP's leadership in varietal development. In another remarkable achievement, one of our technologies was selected among Best Five Technologies of Horticulture SMD of ICAR for release, and four additional technologies were certified by ICAR. We have provided guidance and support from DUS centre of NRCP to release 1st farmer's variety 'Sharad King'.

As we celebrated NRCP's 20th Foundation Day, we also strengthened our outreach by organizing 3 field days, 3 workshops, 5 residential trainings, and 9 on-farm events. To strengthen the livelihood of SC and ST farmers, NRCP organized 6 training and agriculture input programmes under SCSP and TSP scheme.

I sincerely thank all our scientists, staff, collaborators, and the farming community for their unwavering support. Together, let us strive to take NRCP to even greater heights in service of Indian agriculture.

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Visit of Hon'ble Shri. Shivraj Singh Chauhan, Union Minister for Agriculture and Farmers Welfare & Rural Development and Hon'ble Shri. Devendra Fadnavis, Chief Minister of Maharashtra at NRCP technology exhibition stall



Interaction of Dr. R.A. Marathe, Director with dignitaries during Kisan Diwas celebration at ATARI Pune on 23.12.2024

Director, NRCP awarded with 'Life Time Achievement Award' by Asian PGPR Society at Taiwan



Dr. Rajiv A. Marathe conferred with 'Life Time Achievement Award' during '8th Asian PGPR Society International Conference' held at World Vegetable Centre, Taiwan

Research achievements/ Highlights/ Technology developed

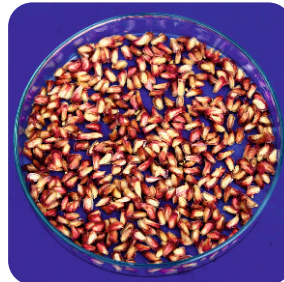
Pomegranate variety Solapur Anardana

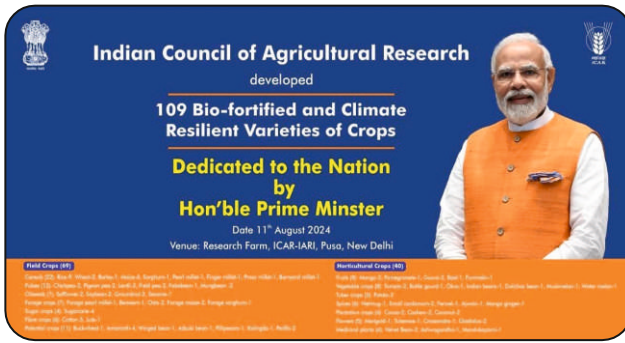
Similar to Solapur Lal, institutes another promising pomegranate variety Solapur Anardana has been released by Central Varietal Release Committee (CVRC) in the online meeting held on 5th August, 2024, GOI vide. Gazette Notification of India No.4536 by Ministry of Agriculture & Farmers Welfare, Government of India dated. 13.11.2024. (for Anardana purpose).

This is one of the 109 bio-fortified varieties dedicated to the Nation by the Hon'ble PM of India on 11.08.2024.

Characteristic:

- ❖ Suitable for 'Anardana purpose'
- ❖ High Yielding Variety (about 20-22 tons/ ha); high Titrable Acidity: 4.8%; High anthocyanin: 460 mg/100g; high Anardana recovery from arils: 21.6%
- ❖ Fruit maturity in 148-150 days.
- ❖ Registered with PPV&FRA, New Delhi (PPV&FRA/REG/2016/1750)





Pomegranate var. Solapur Anardana - Sr.No. 136 CVRC-2024 Notified vide. Min of Agri & FW, Gazette Notification SO 4917 (E) Dated 13.11.2024: This is one of the 109 varieties dedicated by Hon'ble PM to the nation during August 2024



(K. Dhinesh Babu)

Pomegranate variety : Solapur Lal

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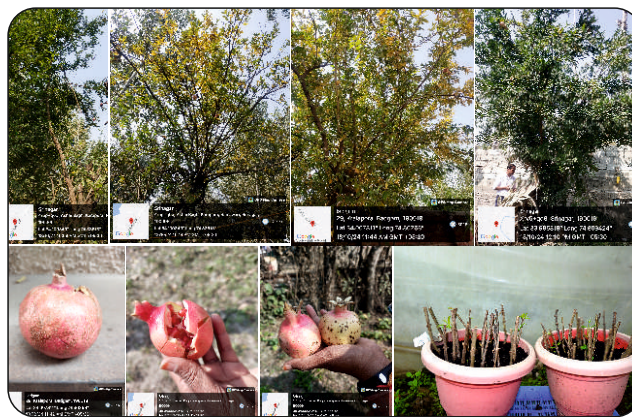


(K. Dhinesh Babu)

Collection and conservation of pomegranate germplasm accessions

Survey cum exploration has been made and collected 08 new pomegranate germplasm accessions from Srinagar and Kashmir districts of Jammu and Kashmir. Also, collected 02 salt tolerant germplasm from ICAR-CSSRI, Karnal, Haryana. In addition, 338 germplasm lines including indigenous and exotic lines are conserved in the well-established field gene banks located at Kegaon and Hiraj research farms of ICAR-NRCP, Solapur which serves collection of genes for diverse characters.





Germplasm accessions collected from Jammu & Kashmir and Haryana states

(Shilpa, P. Roopa Sowjanya, Chandrakant Awachare, Babu K. D. and R. A. Marathe)

Release of “Yellow Nana”-dwarf pomegranate variety for ornamental purpose

'Yellow Nana' a dwarf ornamental variety producing attractive profuse miniature yellow flowers and fruits has been approved by VTIRC committee for release at institute level. The plants of new variety can also go well as an ornamental bush in containers that can be placed in the garden, on a balcony or a terrace. Large scale multiplication and selling of plantlets of this variety will generate income to nursery man, indoor gardeners and other stakeholders.



Yellow Nana

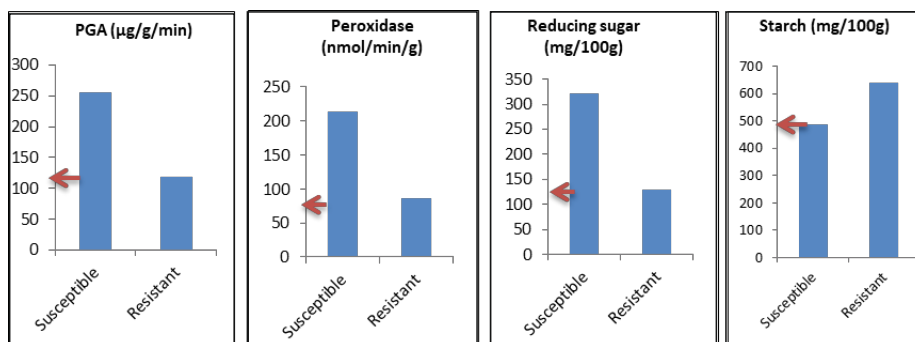
(Shilpa Parashuram, S. H. Jalikop, K. D. Babu, Ravindra Kumar, Roopa Sowjanya P. and R. A. Marathe)

Identification of leaf-based biochemical markers for fruit cracking

Four highly contrasting germplasm for fruit cracking viz. Kabul Yellow (32.5% fruit cracking), Yercaud HRS (19.5% fruit cracking), IC318718 (0% fruit cracking) and 1201 (0% fruit cracking) were evaluated for various biochemical parameters to identify the parameters that can be used in future studies as leaf biochemical markers for identification of cracking resistant breeding material. Out of fourteen parameters tested, four were found to be significantly affected as per the nature of the germplasm i.e resistant or susceptible. The results showed that Polygalacturonase activity, Peroxidase and Reducing Sugars were significantly high in the germplasm lines susceptible to cracking. The increase was 2 folds high in Polygalacturonase activity and 2.5 folds both in Peroxidase and Reducing Sugars. Starch was 32% higher in resistant germplasm. Other parameters such as β -Galactosidase, Total Soluble Sugar, Total Amino Acids, Phenylalanine Ammonia Lyase, Proline, Total



Chlorophyll, Malondialdehyde, Cellulose and Total Phenols showed no clear trend or the differences are negligible. Strong positive correlation of fruit cracking was observed with leaf Polygalacturonase, Reducing Sugars and strong negative correlation was observed with leaf Starch content. Hence, results showed that leaf Polygalacturonase, Peroxidase, Reducing Sugars and Starch are promising indicators for fruit cracking evaluation. However, there is need to find out one or two molecular markers as well for reconfirmation.

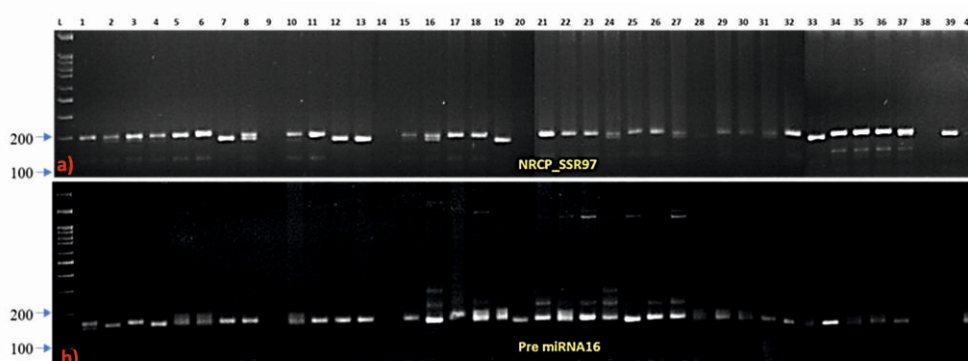


Leaf based biochemical parameters with significant correlation to fruit cracking in contrasting germplasm (bars based on mean values)

(Pinky Raigond, Shilpa Parashuram, Prakash Patil)

Genetic diversity analysis based on eight core markers used for varietal barcode development in pomegranate

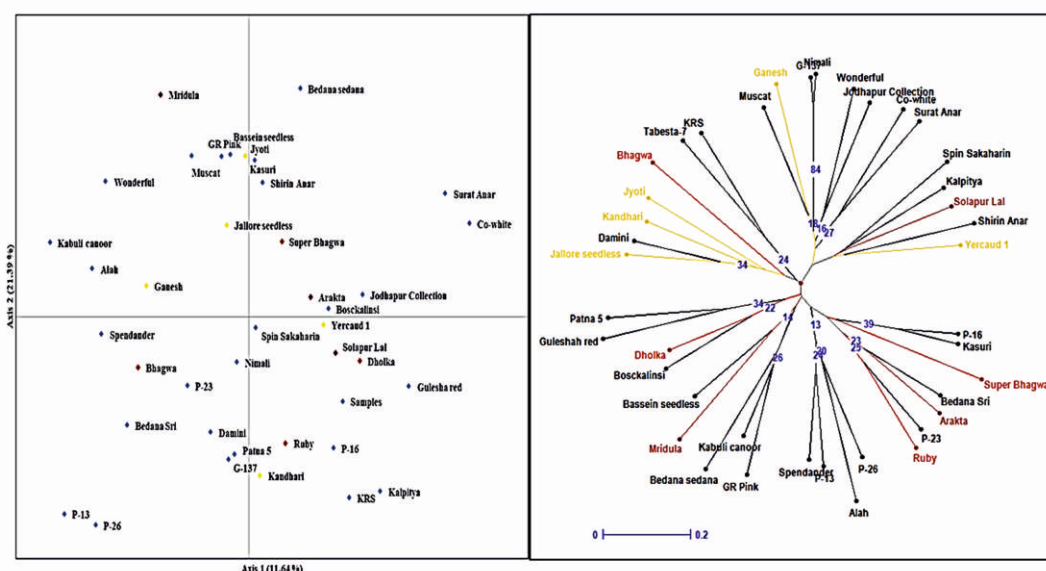
Eight core markers (InDel_84, InDel_88, NRCP_SSR97, HvSSRT_348, HvSSRT_868, Pre miRNA 16, InDel_3, and Pre miRNA 44) were developed for unique marker IDs creation in 12 pomegranate varieties. Genetic diversity was studied among 40 pomegranate varieties using eight core markers. Genotyping clearly depicted a polymorphism across 40 genotypes as shown in Figure. These markers could produce a total of 35 alleles, ranged from 3 to 6 with an average of 4.37 alleles per primer. We have observed high polymorphism rate for all the eight markers on 40 genotypes with PIC values ranged from 0.60 to 0.80 with an average value of 0.72. Also, the expected heterozygosity values varied from 0.59 to 0.78 with a mean value of 0.71. Interestingly, all the markers had high gene diversity values with mean Shannon information index ($I = 1.33$). Also these eight markers revealed low average probability value of identity ($PI = < 0.14$), suggesting high discrimination power on 40 genotypes analyzed.



Genotyping of 40 pomegranate genotypes using genomic and genic markers used for varietal specific marker ID generation, a) profile as obtained for NRCP_SSR97, b) for Pre miRNA-SSR16



The distance matrix exhibited large pairwise genetic distances in terms of genetic dissimilarity values ranging from 0.14 to 1 (with mean = 0.82), suggesting all the genotypes are characterized at great divergence level. Further, the UPGMA- neighbor joining tree and PCA graph also revealed the higher diversity among studied genotypes. Interestingly 12 pomegranate genotypes used for varietal identifications were well distributed in different clusters. This indicated selected markers had the high intra-varietal discrimination ability and are highly suitable for characterization of entire pomegranate germplasm collection maintained at ICAR-NRCP, Solapur.



Dendrogram and PCA plot showing the genetic relationships between 40 pomegranate genotypes based on eight core markers used for unique marker ID generation.

(Prakash G. Patil, Deepali S. Kulkarni, Shilpa P., K. Dhinesh Babu, Chandrakant Awachare, R.A. Marathe)

Rhizoshield: Bio-formulation product of *Trichoderma* species

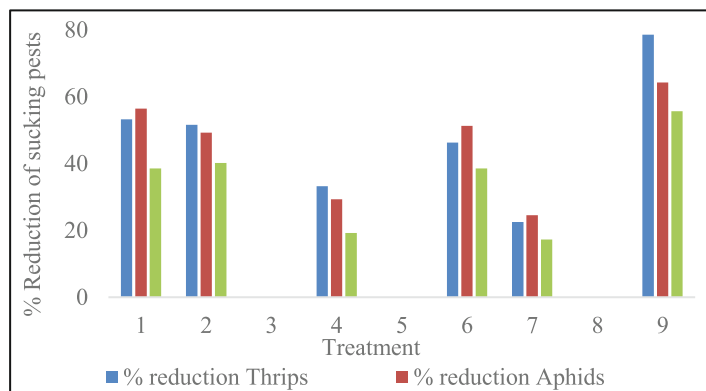
Soil samples collected during the survey, from the healthy plants of wilt infested orchards, were subjected to isolation of beneficial biologicals. Among the different microbes isolated, three identified and characterized *Trichoderma* species were tested individually and in combination for their efficacy against pomegranate pathogens especially wilt fungi and Root Knot Nematode. Based on results obtained in their compatibility; *in-vitro* pathogen inhibition; poly house experiment and their Plant Growth Promoting ability, the consortia product developed was tested under field conditions in different pomegranate growing regions of Maharashtra and Karnataka (150 acres). The positive response was given by the farmers on efficacy of preventive wilt disease management, prolific root development using *Trichoderma* consortia product. The tentative name has given to product as Rhizoshield.

(Somnath Pokhare, Manjunatha N., Mallikarjun H., & R. A. Marathe)



Efficacy evaluation of Entomopathogens against insect pests of pomegranate

The field experiment was conducted to evaluate the efficacy of four entomopathogenic fungi and one entomopathogenic bacteria @ 5g/ml/l water against sucking pests, including thrips, aphids, and mealybugs, with Cyantraniliprole 10.26% OD serving as the standard check. Among the seven treatments, Treatment T1 (*Metarhizium anisopliae* 1.0 % W. P. (CFU: 1×10^8 / g), provided the highest percentage of Thrips reduction (53.2%), Aphids (56.45%), and Mealybugs (38.5%). This was followed by Treatment T2 (*Beauveria bassiana* - 1.0 % W. P. with a CFU of 1×10^9 /g, which exhibited reductions of Thrips (51.55%), Aphids (49.25%), and Mealybugs (40.15%). Treatment T4, utilizing *Pseudomonas fluorescens* – 1.0 % W. P. with a CFU of 1×10^8 /g, demonstrated reductions in Thrips (46.25%), Aphids (51.25%), and Mealybugs (38.55%). These results indicate promising potential for the utilization of *Metarhizium anisopliae* and *Beauveria bassiana* in controlling the targeted insect pests on pomegranate.



Efficacy of different Entomopathogens against sucking pest of pomegranate

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(Mallikarjun H., R.A. Marathe, Manjunatha N., Somnath S. P.)

Pomegranate dried arils fortified millet based nutri bars

Many commercial cereal bars contain added sugars, syrups and sweeteners to enhance taste and lack sufficient fiber and protein, making them less effective at keeping full. Nutri bars offer a convenient, nutrient-rich, and health-friendly alternative to traditional snacks and are perfectly positioned to serve as mini-meals for today's fast-paced world. With this context, the objective was to develop nutri bar, rich in antioxidant and helps to boost immunity. The level of ingredients for the formulation of nutri bars were optimized using central composite randomized design of RSM with factors pomegranate dried arils (10-30%); millets: cereals: pulses (1:1:1) and sweeteners (40-60%). The best formulation for the development of immunity booster nutri bar was use of pomegranate dried arils in the range of 15-20%, sweeteners in the range of 45-50% and millets along with cereals and pulses in the range of 25-30% which provides 812 mg GAE/100g of phenols, 87% antioxidant activity, 26% of fiber and 270 kcal/100g calorific value. It had a shelf life of 6 months at refrigerated conditions.



(Namrata A. Giri, Nilesh N. Gaikwad and R. A. Marathe)



Events attended by the NRCP staff (Seminar/ Webinar/ Symposia/ Conferences)

- **Dr. R. A. Marathe and Dr. Manjunatha N.** attended 8th Asian PGPR International conference: A Bio-Revolution Using Beneficial Microbes for Healthier Soils, Crops and Planet. The conference was organized by World Vegetable Centre, Taiwan during 25-27 September 2024 in collaboration with Asian PGPR Society for Sustainable Agriculture.
- **Dr. R. A. Marathe** delivered keynote address on ‘Harnessing the potential of native microbiome on soil and plant health for sustainable production of pomegranate’ in 8th Asian PGPR International conference at World Vegetable Centre, Taiwan during 25-27 September 2024.
- **Dr. R. A. Marathe** delivered lecture as Invited Speaker on “Caring Soils Beyond Food Security-Climate Change Mitigation & Ecosystem Services” in Global Soil Conference under the aegis of International Union of Soil Sciences in collaboration with ICAR and NAAS during 19-22 November 2024 at NASC Complex, New Delhi.
- **Dr. R. A. Marathe and Dr. Namrata Giri** participated in the ICAR Foundation and Technology Day on 15-16th July 2024 at NAS Complex, New Delhi.
- **Dr. R. A. Marathe** attended the Collaborative Workshop on “Empowering Agriculture: Integrating Advanced Technologies for Farmers Prosperity” under PPP for KVK’s of Maharashtra jointly organized by ICAR- ATARI, Pune and Dhanuka Agritek Pvt. Ltd on 29.07.2024 at College of Agriculture, Pune.
- **Dr. Somnath Pokhare** delivered Lecture on ‘Package of Practices for Sustainable Pomegranate Production’ at the Collaborative Workshop on “Empowering Agriculture: Integrating Advanced Technologies for Farmers Prosperity” on 29.07.2024 at College of Agriculture, Pune.
- **Dr. R. A. Marathe** delivered lecture in 64th Annual Seminar of Maharashtra State Grape Growers Association at Pune during 24-26 August 2024.
- **Dr. Pinky Raigond** attended the webinar on ‘Advances in Artificial Intelligence and Sensor-based Smart Precision Farming’ by Dr. Rajendra Machavaram, IIT Karagpur organized by CTCRI, Kerala on Aug 28, 2024.
- **Dr. Namrata A. Giri & Dr. Nilesh N. Gaikwad** attended International Symposium on “Agricultural Engineering Education for Aspiring Youth in Transforming Agriculture and Engineering Innovations for Next-gen Digital Agriculture” held on 12-14 November, 2024, organized by ISAE at VNMKV, Parbhani, Maharashtra.
- **Dr. Nilesh N. Gaikwad** attended symposium on “Enhancing the exports of fresh Banana and Pomegranate to Global market” organized by APEDA and delivered invited presentation on “Sea protocol for export of pomegranate” before the exporter of the pomegranate on 14th Oct. 2024, at Hotel Fortune, Vashi, Mumbai.
- **Dr. Mallikarjun M.H.** attended the “Webinar on National Learning Week” from 19-25 October, 2024 organized by Capacity Building Unit (CBU) of DARE/ICAR.



- **Dr. Mallikarjun M.H.** attended “Workshop cum Training on Phyto-sanitary Aspects including Implementation of Good Agricultural Practices, Inspection and Treatments for the Export of Pomegranate” on 13.12.2024 organized by DPPQ&S, Faridabad, Haryana.
- **Dr. Mallikarjun M.H.** participated in the “Horticulture Fair” during 21-23rd December 2024 at UHS, Bagalkot, Karnataka.
- **Dr. Shilpa Parshuram** attended First ICPH-2024 International Conference on “Precision Horticulture – advancing technologies for sustainable production, food and environment” held during August 22-24, 2024 organized by Horticulture College and
- **Dr. Ranjan Kumar Singh** participated in the “Global Soil Conference 2024” organized by Indian Society of Soil Science, New Delhi during 19-22nd November 2024.
- **Dr. Ranjan Kumar Singh** participated (online) in the “GIS and Remote Sensing Tools” held during organized by ICAR-NIAP on 18th December 2024.
- **Dr. Ranjan Kumar Singh & Dr. Mallikarjun M. H.** participated in the workshop on “Advances in artificial intelligence and sensor-based precision farming” organized by ICAR-CPCRI Kasaragod, Kerala on 28th August 2024.
- **Dr. Ranjan Kumar Singh** participated in the Training cum workshop on “Drone technology and its application in agriculture” at ICAR-IIWM organized by ICAR-IIWM, Bhubaneswar during 02-03 December 2024.

Trainings/ FLDs/ OFTs organized for the farmers/ students/ entrepreneurs etc. by NRCP (on campus/ off campus)

Field day's

- Field day and farmer interaction meeting of newly released farmer variety of pomegranate '**Sharad King**' in collaboration with Shri. Vitthal Bhosale and ICAR-NRCP, Solapur on 4th July 2024 at Tupewadi, Chhatrapati Sambhaji Nagar. Participants: 2000. (**Team:** Dr. Shilpa P., Dr. Roopa Sowjanya P., Dr. Somnath Pokhare, Dr. R. K. Singh, Dr. R. A. Marathe and Shri. Vitthal Bhosale).





Field day and farmer interaction meeting of newly released farmer variety of pomegranate 'Sharad King' on 4th July 2024 at Tupewadi, Chhatrapati Sambhaji Nagar

- Field day and Seminar on Quality Pomegranate Production organised by ICAR NRCP in collaboration with Sinamai Karjat Agro FPO, Mirajgaon on 5th August 2024 at Belgaon, Dist: Ahilyanagar. Participants 90. (**Team:** Dr. Somnath. S. Pokhare; Dr. Manjunatha N. & Dr. Sangram Dhumal).
- Field visit of Mr. Uri Rubinstein, Agriculture Attache MASHAV, Embassy of Israel by ICAR NRCP in collaboration with State Agri. Department of Maharashtra on 10th December 2024 at Goudwadi, Sangola. Participants: 60 farmers & Govt. officials (**Team:** Dr. S. S. Pokhare and Dr. R. K. Singh).



Field visit of Mr. Uri Rubinstein, Agriculture Attache MASHAV, Embassy of Israel



Field day and Seminar for members of Sinamai Karjat Agro FPO at Mirajgaon

Workshops

1. Workshop on Empowering Agriculture: Integrating Advanced Technologies for Farmers prosperity organized by ICAR-ATARI, Pune in collaboration with Dhanuka Agritek Pvt. Ltd. on 29th July, 2024 at ATARI, Pune. Participants 300 farmers. (**Team:** Dr. R.A. Marathe and Dr. Somnath S. Pokhare).
2. Workshop on Sustainable and Export Quality Pomegranate Production organized by ICAR-NRCP in collaboration with Gurukrupa Agri. Mart. on 01st August 2024 at Goudwadi, Tal. Sangola, Dist. Solapur. Participants: 450 farmers (**Team:** Dr. R.A. Marathe; Dr. S. S. Pokhare; Dr. N. A. Giri; Dr. Shilpa P. & Dr. Sangram S. Dhumal)
3. One-day Workshop on “Pomegranate Plant Protection: Challenges and Possible Solutions” organized by ICAR-NRCP, Solapur & Corteva Agriscience India Pvt. Ltd. on 23rd December 2024 At ICAR-NRCP, Solapur. Participants: 87 farmers. (**Team:** Dr. R. A. Marathe, Dr. S. Pokhare, Dr. Manjunatha N., Dr. C. Awachare and Dr. Mallikarjun H.).



Collaborative Workshop at ICAR-ATARI, Pune & Dhanuka Agritek Pvt. Ltd. on 29th July, 2024





Workshop on Sustainable and Export Quality Pomegranate Production at Goudwadi, Sangola on 1.08 2024



One-day Workshop on organized by ICAR-NRCP, Solapur & Corteva Agriscience India on 23.12.2024

Trainings:

1. Three days Training Programme on “Diagnosis of Pomegranate pest and diseases and their integrated management” under Plant Health Clinic project sponsored by RKVY on 10-12th July 2024 at ICAR-NRCP, Solapur. Participants: 25 farmers (**Coordinators:** Dr. Somnath. S. Pokhare and Dr. Manjunatha N. **Co-coordinators:** Dr. S. Dhumal and Dr. N. Giri).
2. Three days Training Programme on "Harnessing Biocontrol Agents for Sustainable Management of Insect Pests and Diseases of Pomegranate” under Biocontrol Project of RKVY from 29-31st July 2024 at ICAR-NRCP, Solapur. Participants: 25. (**Coordinators:** Dr. Mallikarjun M.H; Dr. Manjunatha, N. & **Co-Coordiators:** Dr. Somnath S. Pokhare; Dr. Shilpa P.).
3. Two days training program on “Post-harvest Management and Value addition in Pomegranate and Banana” organized by ICAR-NRC on Pomegranate, Solapur under MAGNET project of Govt. of Maharashtra from 22-23 August, 2024 at ICAR-NRCP, Solapur. Participants: 35. (**Coordinators:** Dr. Nilesh N. Gaikwad, Dr. Namrata A. Giri).
4. Training Programme on “Diagnosis of Pomegranate pest and diseases and their integrated management” under Plant Health Clinic project sponsored by RKVY from 18-20th December 2024 at ICAR-NRCP, Solapur. Participants: 25 farmers. (**Coordinators:** Dr. Somnath. S. Pokhare and Dr. Manjunatha N., Dr. R. K. Singh and Dr. Namrata Giri).



5. Training on pomegranate emasculation and pollination Sponsored by Dept. of Biotechnology & Crop Improvement, College of Horticulture, Bengaluru, Karnataka from 19-20 December 2024. Venue: NRCP. Participants: 02. (**Coordinator:** Dr. Shilpa Parashuram).



RKVY sponsored farmers training program on Pest and disease management



Post-harvest Management and Value addition in Pomegranate and Banana training under MAGNET project of Govt. of Maharashtra



RKVY sponsored training programs and visit to progressive pomegranate farmer's field at Sangola

Other Programs

1. Pomegranate Cultivation interaction meeting Sponsored by Dhanuka Agritek Limited on 31st July 2024 at Balawadi, Dist Sangola Participants: 70 farmers. (**Team:** Dr. Sangram Dhumal and Dr. Somnath S. Pokhare).



2. Farmers interaction meeting for Pest and disease management in Pomegranate organised by TAO, Pandharpur and ICAR-NRCP, Solapur on 18th August 2024 at Korti, Pandharpur Participants:45 farmers. (**Resource person:** Dr. Somnath S. Pokhare).
3. “IP tools viz., Copyright, Design, Patent, Plant Variety, Trademark, and Technology-Licensing activities” organized by ICAR-NRCP, Solapur in collaboration with IPTM Unit, ICAR, New Delhi on 27 August to 02 September, 2024 at NRCP, Solapur. Participants: 45 (Online) (**Coordinators:** Dr. Nilesh Gaikwad, Dr. K. D. Babu, and Dr. Namrata Giri).
4. Pomegranate Technical meet-2024 at Sakaleshpur, Hassan, Karnataka Sponsored by SRPG FPO, Hassan, Karnataka in collaboration with ICAR-NRCP, Solapur on 03 December 2024 at Venue: Hassan, Karnataka. Participants: 481 (**Coordinators:** Dr. Manjunatha N., Dr. N. N. Gaikwad, Dr. Mallikarjun Harsur, Dr. Shilpa P.)
5. Internal Auditor Training on Quality Management System (QMS) Comprising of ISO 9001:2015 Sponsored by NRCP on 06.12.2024 Venue: NRCP Participants:19 (**Team:** Dr. Shilpa P. & Dr. Mallikarjun M.H.)
6. Survey and Farmers Meeting at Banaskantha organised by ICAR-NRCP and ISHA foundation on 2-6th September, 2024 at Banaskantha, Gujarat. Participants: 80 farmers (**Team:** Dr. Somnath Pokhare, Dr. Chandrakant Awachare and Dr. Mallikarjun M. H.).
7. Interaction meeting on Quality Pomegranate Production Jointly organized by NRCP with Mann Deshi Foundation, Mhaswad on 20th September 2024 at Mhaswad, Dist: Satara Participants: 220 farmers (**Resource person:** Dr. Somnath Pokhare)
8. Package of Practices for Quality Pomegranate Production jointly organised by TAO, Pandharpur and ICAR-NRCP, Solapur on 09th October 2024 at Khardi, Pandharpur Dist: Solapur Participants: 60 farmers (**Resource person:** Dr. Somnath Pokhare).
9. Farmers Interaction Meeting on Quality Pomegranate Production Technology organised by Agrowon Daily Agriculture Exhibition, Sangli on 21st October 2024 at Sangli Participants:135 farmers (Resource person: Dr. Somnath Pokhare).



Survey and Farmers Meeting at Banaskantha; Meeting with Shri Shankarbhai Chaudhari, Chairman, Banas Dairy on 3-4th September 2024



Farmers Interaction Meeting organised by Agrowon Daily Agriculture Exhibition, Sangli



Pomegranate Technical meet-2024 at Sakaleshpur, Hassan, Karnataka



Training attended by NRCP staff

- All scientific staff attended “Internal Auditor Training on Quality Management System (QMS) Comprising of ISO 9001:2015” organized by Manupama Technologies Pvt. Ltd on 06.12.2024.
- Dr. Nilesh N. Gaikwad attended five days online training programme on “IP tools viz., Copyright, Design, Patent, Plant Variety, Trademark, and Technology-Licensing activities” organized by ICAR-NRCP & IP and TM Unit, ICAR, New Delhi during 27 August-02 Sept. 2024 (Online mode).
- All scientific staff attended different training programmes offered on iGOT portal through online mode.



Internal Auditor Training on Quality Management System (QMS) – ISO 9001:2015, held on 06.12.2024 at NRCP, Solapur

Agricultural Exhibitions/ Farmers fair attended/ Technology displayed

- ICAR Foundation and Technology day - exhibited ICAR-NRCP technologies in the same event during 15-16 July, 2024 at NASC complex, New Delhi.
- Karmyogi Sudharkarpant Paricharak Krishi Mahotsav, organized by APMC, Pandharpur at Pandharpur on 15-19th July 2024 (Mr. Vijay Lokhande, Mr. Anmol Ukale)
- 2nd ICAR-IIHR-Industry Meet-2024 and Technology Exhibition, at IIHR Banagluru (Dr. Somnath Pokhare & Dr. Namrata Giri) on 24th October 2024, participants: 250 farmers & Entrepreneurs
- Technology Display through NRCP Stall in Global Soil conference held during 19 Nov 24 to 22 Nov 24 at NAAS Complex New Delhi
- Participated in Horticulture Fair-2024, UHS Bagalkot, 21-23rd December, 2024.
- Technology Display through NRCP Stall in Kisan Diwas function at ATARI Pune on 23rd Dec 2024
- Technology Display through NRCP Stall at DFR Pune function on 26th Dec 2024





Visit of DG, ICAR during technology display through NRCP Stall at DFR Pune on 26.12.2024



Technology Display through NRCP Stall in Global Soil conference, NAAS Complex, New Delhi



NRCP Exhibition stall AGROTECH-2024 at Dr. PDKV, Akola during 27-29th December, 2024



Three days "Totagarika Mela" (Horticulture Fair) organized by UHS, Bagalkot, Karnataka



NRCP Exhibition stall at Krishi Pandhari 2024 at Pandharpur



Dr. Somnath Pokhare delivering NRCP technology presentation and exhibition stall during 2nd ICAR-IIHR-Industry Meet-2024" on 24th October 2024 at ICAR-IIHR, Bengaluru

Peer recognitions/ Awards/ Honors received by the NRCP staff

- **Dr. Rajiv Marathe; Dr. Nilesh Gaikwad and Dr. Namrata Giri** received an appreciation letter for the **International assignment from APEDA**, Ministry of Commerce and Industries, Govt. of India for successfully completing the static trails of the Pomegranate treated samples required for Export to USA using AIR and SHIP Shipment in collaboration with APEDA, NPPO, MSAMB & INI Farms.
- **Dr. Manjunatha N.** has been honored with **Excellent Researcher Award** in recognition for his outstanding contributions and achievements in the field of Plant Growth Promoting Rhizobacteria in the 8th Asian PGPR International conference: A Bio-Revolution Using Beneficial Microbes for Healthier Soils, Crops and Planet at World Vegetable Centre, Taiwan during 25-27 September 2024.
- **Dr. Shilpa Parashuram** received “**Himadri Young Scientist Award - 2023**” for contribution in the field of Horticulture from ISHRD, Uttarakhand during Progressive Horticulture National Symposium held at HNBGU, Srinagar during 17-19 October, 2024.
- **Dr. Rajiv Marathe and Dr. Somnath Pokhare** received **Letter of Appreciation** from the Embassy of Israel, New Delhi for hosting the Mashav Team at NRCP, Solapur and Pomegranate field visit during 9-10th December 2024.
- **Dr. Shilpa Parashuram** received **Best Oral Presentation Award** for the work ‘Solapur Taporatna’ – an early maturing pomegranate variety for commercial cultivation In: First ICPH-2024 International Conference on Precision Horticulture – advancing technologies for sustainable production, food and environment” organized by Horticulture College and Research Institute (TNAU), Periyakulam, Tamil Nadu during August 22-24, 2024.
- **Dr. Namrata Ankush Giri** received **Best Oral Presentation Award** by Indian Society of Agricultural Engineering during “International Symposium on Agricultural Engineering Education for Aspiring Youth in Transforming Agriculture” and “Engineering Innovations for Next-gen Digital Agriculture” from 12-14 November, 2024 organized by ISAE at VNMKV, Parbhani.
- **Dr. Pinky Raigond** received ‘**Best Oral presentation Award**’ for the paper ‘Impact of Hormonal and Signalling Molecule Treatments on Flower Induction in Pomegranate’ presented during International Conference on ‘Current Innovations and Technological Advances in Agriculture and Allied Sciences’ held at Guru Kashi University, Talwandi Saboo, Bathinda (Punjab) during 29-31st August 2024.
- **Dr. Somnath Pokhare** nominated member for the Scientific Advisory Committee of KVK, Solapur-I on 25th July 2024.
- **Dr. Somnath Pokhare** nominated member for the Scientific Advisory Committee of KVK, Malegaon on 2nd December 2024.
- **Dr. K.D Babu** Nomination as a Member on the management Committee of NRCP, Solapur vides ICAR Order No. HS/4-01/2022-IA-V (E-Office no.192058) dated 08.07.2024 for a period up to i.e. 09.04.2024.



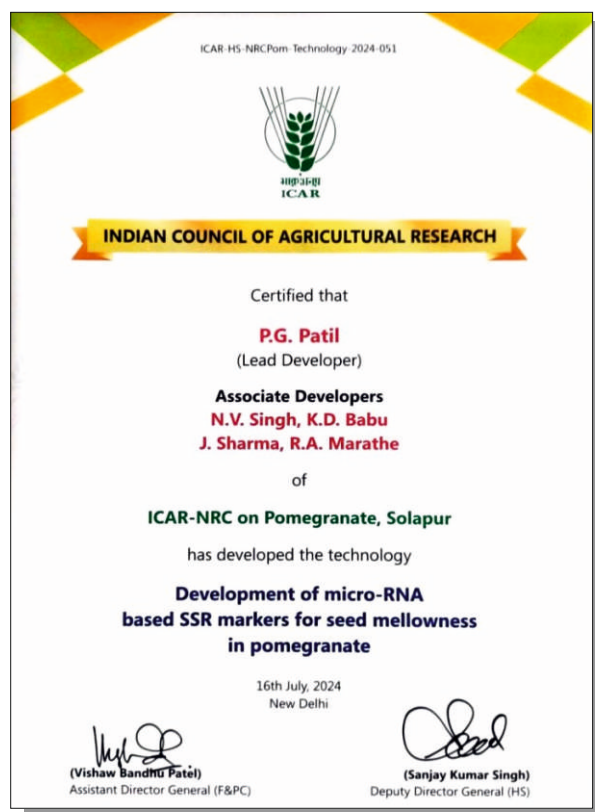
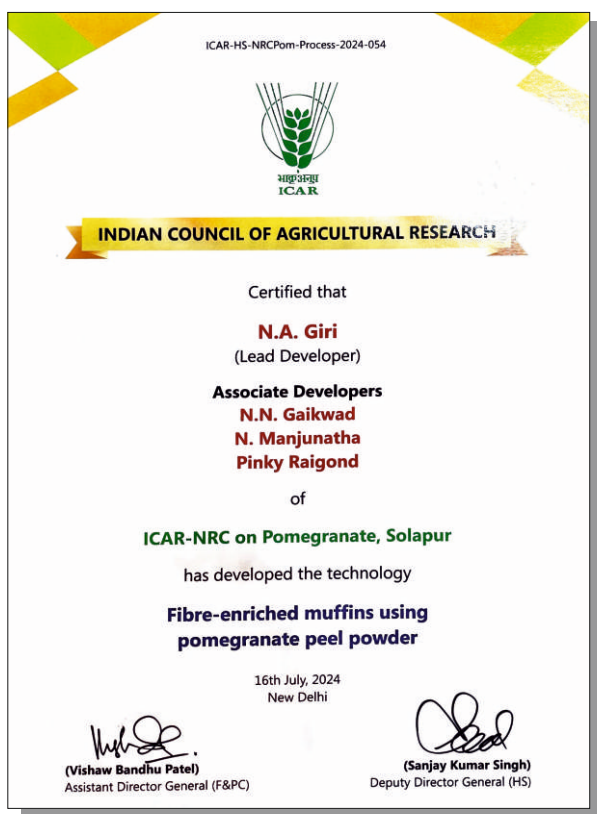


Technology Developed / Certified / Commercialization / Linkages / Collaborations / MoU signed

Technologies Certified by ICAR on its foundation day:

- **“In vitro propagation of Pomegranate cv. Bhagawa and Super Bhagawa including Bio-hardening”** Lead Developer: N. V. Singh. Associate Developers: R.A. Marathe, K.D. Babu, Chandrakant Awachare. (Best of 05 technologies selected by Horticulture SMD of ICAR for its release on foundation day event)
- **“Fiber-Enriched Muffins using Pomegranate Peel Powder”** Lead Developer: N. A. Giri Associate Developers: N. N. Gaikwad, N. Manjunatha and Pinky Raigond.
- **“An Endophyte Mediated Resistance against Bacterial blight of Pomegranate (*X. axonopodis* pv. *punicae*): An Ecofriendly and sustainable approach”.** Lead Developer: Manjunatha N. Associate Developers: N. V. Singh, J. Sharma, Somnath Pokhare, R. A. Marathe and M. H. Mallikarjun.
- **“Conventional PCR based Early and Quick Detection of Bacterial Blight pathogen”.** Lead Developer: Manjunatha N. Associate Developers: J. Sharma, Somnath Pokhare, R. A. Marathe, M. H. Mallikarjun, P. G. Patil.
- **“Development of micro-RNA based SSR markers for seed mellowness in Pomegranate”.** Lead Developer: P.G. Patil. Associate Developers: N. V. Singh, K. D. Babu, J. Sharma and R.A. Marathe.





- ICAR – NRCP has been recognized as ‘Centre of Excellence’ by Agribusiness Network Project (MAGNET), MSAMB, Govt of Maharashtra for Human Resource Management and MoU to this effect has been signed.



Publications

Research papers

1. Giri, N. A., Bhangale, A., Gaikwad, N. N., Manjunatha, N., Raigond, P., & Marathe, R. A. (2024). Comparative study on effect of pomegranate peel powder as natural preservative and chemical preservatives on quality and shelf life of muffins. *Scientific Reports*, 14(1), 10307. **(NAAS Score: 10.6)**
2. P. Shilpa, V. P. Bhosale, P. Roopa Sowjanya, K. D. Babu, A. R. Girme, T. H. Daphale and R. A. Marathe. (2024). Morphological and Physico-Chemical Characteristics of New Pomegranate Variety “Sharad King”. *Agricultural Research*. <https://doi.org/10.1007/s40003-024-00799-3> 1. **(NAAS Score: 7.4)**.
3. Patil, P. G., Jamma, S. M., Manjunatha, N., Babu, K. D., Gaikwad, N., Raigond, P., Shilpa, P., Murkute, A. A., Bohra, A., & Marathe, R. A. (2024). Development of Novel InDel Markers for Breeding Applications in Pomegranate (*Punica granatum* L.). *Plant Breeding*. 0:1–19. <https://doi.org/10.1111/pbr.13239>. **(NAAS Score: 7.5)**.
4. Raigond, P., Singh, N. V., More, A. K., Parashuram, S., Giri, N. A., Awachare, C., Roopa S., Patil P. G., Babu D. K. & Marathe, R. A. (2024). Impact of PGRs, polyamines and potassium to improve pomegranate flowering behaviour, fruit set and fruit quality. *Biocatalysis and Agricultural Biotechnology*, 61, 103355. **(NAAS Score:9.40)**.
5. Gaikwad, N. N., Kadam, A. A., Giri, N. A., Suryavanshi, S. K., & Marathe, R. A. (2024). Enhancing bioactive compounds retention in pomegranate juice powder through foam mat drying. *Journal of Food Process Engineering*, 47(8), e14707. **(NAAS Score:9.00)**.
6. Gaikwad, N. N., Giri, N. A., Suryavanshi, S. S., & Marathe, R. A. (2024). Osmotic assisted convective drying of pomegranate arils: Process optimisation, structural characterization, and bioactive compound evaluation. *International Food Research Journal*, 31(3), 624-636. **(NAAS Score:7.17)**.
7. Manjunatha, N., Pokhare, S.S., Agarrwal, R., Singh, N.V., Sharma, J., Harsur, M.M. and Marathe, R.A., (2024) Possible biocontrol of bacterial blight in pomegranate using native endophytic *Bacillus* spp. under field conditions. *Frontiers in Microbiology*, 15, p.1491124. **(NAAS Score: 10.00)**.

Book

- Marathe, R.A., K. Dhinesh Babu and Roopa Sowjanya (2024). Technological Innovations in Pomegranate Cultivation 2005-2021. ICAR-NRCP Book No. NRCP/2024/1, ICAR- National Research Centre on Pomegranate, Solapur 413255 (Maharashtra) pp 1-110. ISBN – 978-81-980231-3-1.

Popular articles

- Gaikwad, N. N., Giri, N.A., and Marathe, R.A. (2024) Foam Mat Drying of Pomegranate Juice for retention of Bioactive Compounds. ICAR-NRCP, E-Newsletter, Jan-June 2024. Pg. No. 1.
- Giri, Namrata A., Gaikwad, Nilesh N. and Marathe, R. A. 2024 (April). By-Products from Pomegranate juice processing industries and its applications. *Agro India*, April, P-15-16. *Agro India Magazine*.



Training Manuals

1. Mallikarjun M. H., Babu K. D., Pinky Raigond, Shilpa P. and Marathe R. A. E-Training manual on “Harnessing Biocontrol Agents for Sustainable Management of Insect Pests and Diseases of Pomegranate” organized by ICAR-National Research Centre on Pomegranate, Solapur and RKVY, Govt. of Maharashtra from July 29-31, 2024. E-Training Manual No. NRCP/2024/2, p. 90.
2. Pokhare S. S., Majunatha N., Giri, N. A., Singh, R. K. and Marathe R. A. (2024). Training Manual on Identification and Integrated Management of Pomegranate Pests and Diseases. Training Manual/NRCP/RKVY/2024/02 pp.61.

Success story

- Gaikwad N. N., Giri N. A., Marathe, R. A. (2024). Breaking Barriers, Bridging Continents: NRCP Intervention in Indian Pomegranate Export to USA- A Success Story. Tech folder/ NRCP/2024/01, ICAR-NRCP, Solapur, pp:1-8.

New Projects sanctioned

1. Evaluation of the herbicide Indaziflam 20g/l + Glyphosate –isopropyl ammonium 540g/l SC (Alion Plus) for its weed control efficiency and crop safety level in pomegranate. Funding Agency: Bayer Crop Science Ltd. Budget- 26,47,330/- **Project PI: Dr.K. Dinesh Babu.**
2. Evaluation of Spidoxamat 9.6% + Spinetoram 12% WG for Bio-efficacy against thrips in pomegranate, and Evaluation of Spidoxamat 9.6% + Spinetoram 12% WG for Bio-efficacy against Mealybugs and Fruit borer (Anar Butterfly) in pomegranate, funding agency: Bayer Crop Science Limited, Budget 36,12,841/- **Project PI: Dr. Mallikarjun M.H.**

Independence Day

The Institute celebrated the 78th Independence Day on 15th August 2024 with great enthusiasm and patriotic spirit. The Indian National Flag was hoisted by Dr. R. A. Marathe, Director, NRCP, in the presence of all scientific, technical, administrative, and contractual staff of the Centre. Following the flag hoisting, Director, NRCP addressed the gathering with an inspiring speech, highlighting the significance of the day and the Institute’s contributions to national development. During the event, scientists involved in the development of technologies recently released by ICAR on its Foundation Day were felicitated for their commendable work. A variety of programmes were organized to mark the occasion. As a gesture of appreciation and care, the Director also distributed protective shoes and clothing to the farm labourers working at the Centre.





RAC

The seventeenth Research Advisory Committee (17th RAC) Meeting of ICAR –National Research Centre on Pomegranate (NRCP) was held on July 23, 2024 at ICAR–NRCP, Solapur under the Chairmanship of Dr. C. D. Mayee, Former ASRB Chairman, New Delhi. Dr. K. Dhinesh Babu, Member Secretary extended a warm welcome to the Hon'ble Chairman and esteemed RAC members. Dr. R.A. Marathe, Director, ICAR - NRCP extended welcome and felicitated RAC team. This was followed by introduction of Scientists and RAC team. The Chairman requested Dr. V. B. Patel, ADG (HS-II) to speak about the ICAR's expectation from this Institute. Later, one scientist from each working groups (Horticulture, Crop improvement, Protection) presented the major achievements of the group. In the afternoon, committee also visited the labs and field experiments gave suggestions regarding the future direction of the research work of the institute. At last, chairman Dr. C. D. Mayee appreciated the achievements of the institute and the efforts taken by NRCP for outreach and capacity building activities and suggested to work on formulation of beneficial microbes for preventive pest and disease management.



Felicitations of RAC chairman by Director NRCP, and NRCP scientists with RAC committee



Vigilance Awareness Week:

Vigilance Awareness Week was celebrated in ICAR-NRCP, Solapur during 28-31 October 2024. Institutes Nodal Officer for Vigilance, Dr. K. Dhinesh Babu highlighted the importance of raising public awareness about corruption and promote a "Culture of Integrity" in governance and public life, and need for preventive Vigilance and importance of Vigilance Awareness week to the staff of ICAR-NRCP, Solapur. Scientific and Administrative staff of the institute took the pledge during the event.



Staff of ICAR-NRCP to attend the pledge taking ceremony on 28.10.2024

20th Foundation Day of NRCP

The 20th Foundation Day of National Pomegranate Research Centre Solapur was celebrated under the chairmanship of Dr. Parmeshwar Shiragure, Director-in-Charge. Dr. Lalasaheb Tambde, Senior Scientist and Head, Krishi Vigyan Kendra, Solapur grace the occasion as the Chief Guest, while Dr. Nitinkumar Ranshur, Chief Scientist and ADR Solapur and Dr. Baswaraj Raigond, Senior Scientist, IIMR, Solapur were the Guests of Honour.

Dr. Dinesh Babu moderated the programme and presented the important achievements of National Pomegranate Research Centre Solapur. On this occasion, a book on Pomegranate technologies developed by ICAR-NRCP from its inception in 2005 to 2021 was released by dignitaries. Pomegranate farmer Mr. Natesh from Karnataka & Mr. Ramhari Surase from Nashik, Maharashtra were felicitated in the programme. Under the Swachhata Hi Seva initiative, the sanitation workers of the organization were given the Safaimitra Samman Award. Along with this, brush cutters were distributed to Scheduled Caste farmers under the Scheduled Caste Sub-Plan (SCSP). Dr. Tambade and Dr. Raigond in their addresses appreciated the work of ICAR-NRCP. Dr. Dinesh Babu and Dr. Sangram Dhumal coordinated the program, while Dr. Ranjan Singh proposed the vote of thanks.





हिंदी पखवाडा

राष्ट्रीय अनार अनुसंधान केंद्र, सोलापूर में १४ से २७ सितंबर २०२४ के दौरान हिंदी पखवाडा मनाया गया। श्री संजीव कुमार, बैंक ऑफ महाराष्ट्र, मुख्य अतिथि के रूप में उपस्थित थे। इस पखवाड़े के दौरान विभिन्न प्रतियोगिताएं जैसे कि आशुभाषण, वाद-विवाद, निबंध, हिंदी टिप्पण व प्रारूप लेखन/पत्र लेखन, प्रश्न मंच, हिंदी काव्य पाठ, कंप्यूटर पर यूनिकोड में हिंदी टाइपिंग व कहानी लेखन का आयोजन कराया गया। हिंदी पखवाड़े में केंद्र के सभी कर्मचारियों ने बढ़-चढ़कर हिस्सा लिया। हिंदी पखवाड़े का समापन प्रतियोगिता के विजेताओं को मुख्य अतिथि द्वारा सर्टिफिकेट्स देने से हुआ।



19th “Parthenium Awareness Week”

Parthenium Awareness Week was observed at NRCP from 16th to 22nd August 2024 with the aim of raising awareness about the harmful effects of the parthenium weed and promoting its management. The programme commenced with the release of Mexican beetles by Director, NRCP, as a part of the biological control strategy. This was followed by a parthenium uprooting drive involving NRCP staff. Several activities were organized throughout the week, including awareness campaigns for farmers and school students, demonstrations on compost making from parthenium biomass, herbicide application, and a student rally to spread awareness in the surrounding areas.



Activities under Parthenium awareness week

Swachhta Hi Seva & 155th birth anniversary of Mahatma Gandhi on 02.10.2024

As part of the nationwide ‘Swachh Bharat Abhiyan’ led by Hon’ble Prime Minister Shri Narendra Modi, NRCP organized the ‘Swachhta Hi Seva’ programme from 15th September to 2nd October 2024. Activities included cleanliness drives on the Institute premises, celebration of the 155th birth anniversary of Mahatma Gandhi, and distribution of first aid kits and clothes to sanitation workers. Tree plantation (Banyan, Peepal) was also carried out at Sahakar Maharshi Shankarrao Mohite Patil Vidyalaya, Kegaon, Solapur.





Activities under Swachh Bharat Abhiyan

Ek Ped Maa Ke Nam Abhiyan (एक पेड़ माँ के नाम अभियान)

As a part of the campaign under Ministry of agriculture and farmers Welfare NRCP organised “Ek Ped Maa ke Nam” on 21st August, 2024 with all the staffs of NRCP. Total 140 plants are planted in two phases.



Outreach activities

Activities under SCSP Project:

A two-day 'Farmer-Scientist Interaction and Input Distribution Programme' was held on 10th-11th July 2024 at NRCP, Solapur. Around 105 farmers from Solapur district participated and received farm inputs including pesticides, fungicides, organic manures, and fertilizers. On the occasion of Independence Day (15th August 2024), an input distribution programme was organized at the Institute, where gum boots and hand gloves were provided to farm workers. A one-day 'Farmer-Scientist Interaction and Input Distribution Programme' was conducted on 25th September 2024, benefiting 20 farmers with the distribution of agri-machinery such as weed cutters. A training-cum-input distribution programme on 'Advanced Fruit Cultivation in Dryland Areas' was held on 30th September 2024 at Karamba, North Solapur. Inputs distributed included 1,500 mango saplings, 1,500 Kagzi lime seedlings, and biofertilizers.





Farmer-Scientist interaction and input distribution programme organized under SCSP scheme on 10-11 July 2024



Agricultural input distribution and Swachta awareness programme on 2.10.2024 at Karamba, Solapur

Events organized under STC

The ICAR-NRCP conducted a one-day Training, Agri-input distribution cum technology demonstration programme for tribal farmers of Nashik district on July 2, 2024. This initiative, in collaboration with the Pomegranate Research and Technology Transfer Centre (PRTTC) Lakhmapur and the State Department of Agriculture, Government of Maharashtra, aimed to support tribal farmers in Nashik District under the STC Scheme. The event included a series of lectures and practical demonstrations, providing valuable insights into effective agricultural practices. Items distributed: Cycles- 42, Backpack sprayer No.- 41, NPK: 19:19:19 (5 kg pack), Nano DAP (500 ml pack), Micronutrient mixture state grade (500 ml pack), Fipronil 40% + Imidacloprid (250 g pack), Propiconazole 25% EC (1-Litre pack), Literature of SHB. No. of Beneficiaries: 42





Distribution and demonstration of Agriculture inputs and equipment to the ST beneficiaries under STC-TSP Scheme at Lakhmapur, Nasik, Maharashtra on 02.07.2024

Research collaboration with CITH, Srinagar

ICAR-NRCP, Solapur, in collaboration with ICAR-CITH, Srinagar (J&K), has initiated the introduction and evaluation of the pomegranate variety 'Solapur Anardana' under temperate climatic conditions.



Farmer and Students Visitors



Students of ABIM & SS, Solapur at NRCP



Farmer Group from Aalephata, Pune at NRCP Solapur



| S.N. | Date | Organization/Place | Types of visitors | No. |
|------|------------|--|-------------------|-----|
| 1. | 12/07/24 | Farmer group from Aalephata, Pune | Farmers | 12 |
| 2. | 07/08/24 | Sharachandra Pawar College of agriculture Baramati | Student | 06 |
| 3. | 08/08/24 | Sidhanatha Lokavikas Pratishthan, Mangalvedha, Solapur | Student | 40 |
| 4. | 13/08/2024 | Jayantrao Bhosale Krishna College of Agriculture Rthare BK | Student | 08 |
| 5. | 23/08/24 | S.R.Chandak English High school, Solapur. | Student | 24 |
| 6. | 25/09/24 | Lokmangal College of ABM, Wadala, Solapur | Student | 43 |
| 7. | 27/09/24 | Karmveer Dr. M. Jagdale Krishi Mahavidyalaya, Barshi | Student | 53 |
| 8. | 30/09/24 | ACABC students from Shriram Gramin Sanshodhan Va Vikas Pratishthan | Student | 20 |
| 9. | 30/09/24 | ABIM & SS, Solapur under Bharati Vidyapeeth | Student | 37 |
| 10. | 11/10/24 | C.P. College of Agriculture, Sardarkrushinagar Dantiwada Agriculture University, Gujarat | Student | 96 |
| 11. | 15/10/24 | C.P. College of Agriculture, Sardarkrushinagar Dantiwada Agriculture University, Gujarat | Student | 97 |
| 12. | 12/11/24 | Kalasalingam School of Agriculture and Horticulture, Krishnankoil, Tamil Nadu | Student | 35 |
| 13. | 03/12/24 | ACABC students from Shriram Gramin Sanshodhan Va Vikas Pratishthan | Student | 14 |
| 14. | 09/12/24 | SBZ, Mahavidyalaya, Barshi | Student | 30 |
| 15. | 17/12/24 | PM Shri. Kendriya vidyalaya Solapur | Student | 180 |



Lokmangal College 25th September 2024





C.P. College of Agriculture, Gujarat

Infrastructure/Facilities developed at NRCP

Two New Experimental Block developed:

1. New Breeding Block for genetic enhancement of fruit colour in pomegranate (669 F1s) established on 27 September 2024 at Kegaon farm, ICAR-NRCP, Solapur, inaugurated by RAC committee
2. New Experimental block planted in Hiraj Farm, during 27 Nov 2024 with new hybrids, elite genotypes free from BBD, hybrids with big size fruits, other var. Population: 600.



Sick plot: A controlled wilt and nematode sick plot has been developed in an area of 8000 sq.ft at Research Farm, Hiraj, ICAR-NRC on Pomegranate, Solapur. The primary purpose is to screen pomegranate breeding lines, test new cultivars, and identify pomegranate plants with resistance to specific wilt diseases (*Fusarium* sp. and *Ceratocystis fimbriata*) and root-knot nematode, and to conduct bio-efficacy trials. It is the first of its kind facility created among ICAR institutes, especially for horticulture crops.



Beekeeping initiative: A flowering block with seven different types of flowering plants has been established beside the B1 and B2 blocks at Kegaon as a source of nectar and pollen for beehives placed at five locations within the NRCP premises. These beehives have been set up to enhance pollination services for pomegranate crops. Support training and demonstration programs on beekeeping for pomegranate farmers and stakeholders. This initiative aims to improve fruit set, enhance yield, and promote sustainable beekeeping practices in pomegranate orchards.



Bumper yield of Solapur Lal, a biofortified variety of NRCP from Model orchard of NRCP



HPLC facility inaugurated by Director NRCP, created under RKVY project



Construction of Farm WBM road

Joining

1. Mr. Kuldeep Vaishya joined as Assistant in the Administrative section on 11.09.2024.
2. Ms. Sweety joined as Assistant in the Finance section on 19.11.2024.



'विदेही गुणमधुषुद्ध दारुणं बंकेयुल मुमनदरं हंषु हंषु अदामु'

अवधः राज् दृष्टवः विदेही नगरात्पुत्रावः दारुणं विदेहीयः मुमनदरं हंषु हंषु अदामु... (The text continues with a story or report, but the image is blurry and the text is mostly illegible due to low resolution and blurring. I will transcribe the visible text where possible.)



वर्तमानकः नगरात्पुत्रावः हंषु विदेहीयः मुमनदरं हंषु हंषु अदामु... (The text continues with a story or report, but the image is blurry and the text is mostly illegible due to low resolution and blurring. I will transcribe the visible text where possible.)

विदेही चालिषं दारुणं बंकेयुल सलहं

अवधः राज् दृष्टवः विदेही नगरात्पुत्रावः दारुणं विदेहीयः मुमनदरं हंषु हंषु अदामु... (The text continues with a story or report, but the image is blurry and the text is mostly illegible due to low resolution and blurring. I will transcribe the visible text where possible.)



वर्तमानकः नगरात्पुत्रावः हंषु विदेहीयः मुमनदरं हंषु हंषु अदामु... (The text continues with a story or report, but the image is blurry and the text is mostly illegible due to low resolution and blurring. I will transcribe the visible text where possible.)

डाळिंब लागवडीसाठी शेतकऱ्यांना पूर्ण पाठबळ

जिल्हाधिकारी आशीर्वाद : गौडवाडीमध्ये डाळिंब उत्पादक संघातर्फे कार्यशाळा

सकाळ वृत्तिका
मोलापूर, ता. २ - डाळिंब पीक हे मोलापूर जिल्ह्यासाठी अत्यंत योग्य पीक आहे. डाळिंबासाठी मोठे मागले आहे. जिल्हात डाळिंबाची मोठ्या प्रमाणावर लागवड आहे. यासाठी शासन व प्राशासन प्रयत्न करत आहे. डाळिंबाच्या लागवडीसाठी शेतकऱ्यांना शासन व प्राशासन रंगत देऊ पाहते. शासन असेलच विद्युत नियमावलीकरीता कुमारा आशीर्वाद यानी अत्यंत केला.



डाळिंब (डाळिंब) डाळिंबाच्या लागवडी व यासाठी मोठ्या प्रमाणावर लागवड आहे. यासाठी शासन व प्राशासन प्रयत्न करत आहे. डाळिंबाच्या लागवडीसाठी शेतकऱ्यांना शासन व प्राशासन रंगत देऊ पाहते. शासन असेलच विद्युत नियमावलीकरीता कुमारा आशीर्वाद यानी अत्यंत केला.

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गांवकरी

राम सुरसे यांना आदर्श डाळिंब उत्पादक शेतकरी पुरस्कार

राष्ट्रीय डाळिंब संशोधन केंद्राकडून गौरव
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डा. परमेश्वर शिरुरे यांचे प्रतिपादन : राष्ट्रीय डाळिंब संशोधन केंद्र सोलापूरचा वर्धापन दिन उत्साहात

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'विदेही गुणमधुषुद्ध दारुणं बंकेयुल मुमनदरं हंषु हंषु अदामु'

अवधः राज् दृष्टवः विदेही नगरात्पुत्रावः दारुणं विदेहीयः मुमनदरं हंषु हंषु अदामु... (The text continues with a story or report, but the image is blurry and the text is mostly illegible due to low resolution and blurring. I will transcribe the visible text where possible.)



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